



Large Metro Passenger Transit System Deploys KVX Series Extenders for CCTV Security

CHALLENGE

India strives to become a self-reliant country in all areas of the economy, infrastructure, system, demography, and demand. A major initiative based on this philosophy is underway to revolutionize the country's passenger movement systems. To this end, new passenger transit systems are in the works.

Keeping its citizens safe from personal and property crimes by monitoring, transmitting, and recording images via CCTV is a priority for the new metro system. Each of the metro stations must have access to multiple CCTVs for monitoring security in the stations. Specifically, the metro system wanted an affordable solution to extend KVM signals over CATx and fiber for the CCTV application. They also desired to connect serial (RS-232) CCTV joysticks. The requirement is for varying distances ranging from less than 100 meters to 550 meters.

The metro system reached out to an experienced system integrator that was primed to assist in the quest to create a state-of-the-art metro transportation system. The systems integrator already had an established working relationship with Black Box and we had other projects with them.

The integrator turned to Black Box to solve the metro's challenge of extending the KVM signal over CATx and fiber for CCTV applications in the metro stations. Along with joysticks, the resulting solution had to support four USB ports and one RS-232 port, and extend distances up to 100 meters in some stations and more than 100 meters in other stations.

SOLUTION

As the installation planning began, Black Box recommended single-monitor twisted-pair copper DVI extenders (KVXLC-100) to achieve distances up to 100 meters over copper cable, and single-monitor fiber DVI extenders (KVXLCF-100) along with extended temperature SFPs (LFP413) to handle remote connection distances up to 550 m over singlemode fiber.

While the metro system also wanted to connect joysticks at the copper extender receiver locations, the planning process ran into a snag. The metro was expecting to work their RS-232

CLIENT:
LARGE METRO PASSENGER TRANSIT SYSTEM

REGION:
INDIA

INDUSTRY:
TRANSPORTATION

SOLUTION:
KVX KVM EXTENDERS

SERVICES:
PROJECT DESIGN



SOLUTION (CONTINUED)

Axis joysticks over the KVXLC's built-in serial port, but the extenders models use a standard RS-232 pin configuration with pins 2, 3 and 5 active, and an Axis Joystick needs to have full DB9 pinout connectivity. To resolve this roadblock, Black Box suggested a USB-to-serial converter that did have the full DB9 pinning required to work with the Axis joysticks. The converter's USB interface plugged into the extender, and the correctly-pinned DB9 port matched the joystick's interface precisely.

To round out the customer's stipulations, the proposed KVX extenders in CATx and fiber versions also include transparent USB and a built-in RS-232 port. The customer conveniently received the extenders, the SFPs, and the converters all from one source – Black Box.

RESULTS

The resulting extenders solution addressed each and every one of the metro system's requirements. Copper and fiber extenders installed in the metro stations can access multiple CCTV workstations from the centralized location, over the required distances. In addition, the combination of the extenders with Black Box USB-to-Serial Converters perfectly resolved the metro's joystick pinning dilemma. Using two sets of single-monitor extenders gave the customer the redundant solution they needed to ensure fail-safe operation.



The metro system was impressed with the solution's plug-and-play connectivity and transparent USB 2.0 support. Now they have a solution to monitor 24/7 what's going on in and around the metro stations. Because the customer was happy with the resulting system and the support provided by Black Box, they placed a second order.

Going forward, the precedent set by this project can serve as a basis for metro station monitoring planning in other regions or countries. The integrator, leveraging its multiple offices in APAC's largest system in India, is set to replicate this solution at other locations by partnering with Black Box to deliver cutting-edge products, unparalleled technical support, and exceptional customer satisfaction.